



MILLET REVIVAL IN SUSTAINABLE AGRI-FOOD SYSTEMS: A MARKETING PERSPECTIVE WITH SDG INTEGRATION -A CONCEPTUAL REVIEW WITH CONTEXTUAL REFERENCE TO COIMBATORE DISTRICT

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ABSTRACT-----

The restoration of millets in India is not only an agronomic development but also a political marketing change of sustainable agri-food systems. With Coimbatore District, Tamil Nadu as its main target, the current paper investigates the areas of millet production, marketing and consumption behaviour using an SDG-based analytical concept. Based on sustainable marketing theory, the Triple Bottom Line conceptualization, value chain and consumer behaviour models, the paper then conceptualizes a Production → Marketing → Consumption SDG Outcomes pathway, with marketing serving as the transmission mechanism of the most critical mechanism of translating environmental and nutritional benefits into specific quantifiable development outcomes. Historically marginalized in Green Revolution, millets are re-positioned as climate-resilient, low GI, and high-fiber functional foods in line with urban trends of healthy and green consumerism. The review shows that policy support and Farmer-Producer Organisations (FPOs) have enhanced supply chains and market access, however, market penetration is highly reliant on health-based branding, positioning based on regional identity, experience promotion, Omni-channel distribution, consumer education, and product innovation. Although increased awareness has taken place, there remains an awareness-purchase gap because of price sensitivity, less convenient format and distribution availability. The paper suggests an SDG-compatible marketing model between sustainable production (SDGs 2, 12, 13), inclusive value chains (SDGs 8, 10), and responsible consumption and health outcomes (SDGs 3, 12), and how the millet revival can be used as a sustainability transition model and a competitive differentiation model in regional markets.

KEYWORDS: Health Branding, Millet Marketing, Sustainable Agri-Food Systems-----

INTRODUCTION

The millets are traditionally grown in semi-arid areas of Tamil Nadu including the Coimbatore district. Nonetheless, the period of the Green Revolution saw the acreage of millet reduce as a result of the policy in favour of rice and wheat (Pingali, 2012). In recent years, there has been a revived concern over climate-resistant crops and the prevention of lifestyle diseases, which has re-established millets as an important ingredient in sustainable food systems. The United Nations proclaimed the International Year of Millets 2023, which became a milestone in the promotion of millets around the world (United Nations, 2023). Millet value chains have been enhanced through policy interventions, such as Minimum Support Price (MSP) support as well as Farmer Producer Organization (FPO) development in India.

Millet products such as finger millet (ragi), pearl millet (kambu), foxtail millet (thinai) are being distributed by diversified marketing channels (organic retail stores, Farmer Producer Organizations (FPOs), supermarkets, e-commerce, and even government nutrition programs) increasingly in Tamil Nadu and specifically in the Coimbatore district. Marketing Millet revival can be motivated using the health positioning, sustainability branding, ethical consumption stories, and premiumization via value addition. Millets are commonly marketed as low glycemic index, fiber-rich, climatologically resilient grains that would fit the modern city consumer needs of functional foods. In spite of this new momentum, there are still brand differentiation issues, pricing competitiveness compared with rice and wheat, consumer perception obstacles, and supply chain coordination issues.

Although the research available highlights nutritional and agronomic advantages of millets, there are still few studies that combine sustainable marketing theory with SDG frameworks at regional level. In specific districts, such as Coimbatore, the mediation of the connection between the production systems and SDG outcomes by marketing is not fully examined. The current study thus explores the mediation of the marketing mechanisms between sustainable production systems and SDG results in Coimbatore district.

Objectives

- To explore millet revival in terms of sustainable marketing.
- To test the mediation model of production and SDG results by marketing.
- To generalize literature relating to consumer behaviour and value chain integration in millet systems.
- To create an SDG conceptual marketing framework that is contextualised to Coimbatore district.

Conceptual Framework

Sustainable marketing theory

Sustainable marketing is the approach that incorporates environmental stewardship, social equity and business profitability in the business strategy. It is much more attuned to the Triple Bottom Line, that focuses on people, planet, profit; stakeholder theory, which increases the accountability of all parties, and responsible consumption models, which promote ethical purchase decisions. Millets are an inherent part of such a paradigm because they need little water, do not depend only on chemical inputs, are rich in nutrients and can endure in extreme climates. However, the sustainability attributes are not the only assurance to a market success. Knowing the ecological and social benefits, marketing systems should be able to convert them into the perceived consumer value.

SDG Linkage framework

The proposed conceptual framework linking **Production-Marketing-Consumption-SDG outcomes**



Some of these Sustainable Development Goals overlap with this subject of Millet marketing. SDG 2 (Zero Hunger) is dealt with by nutritional security and crop diversification, SDG 3 (Good Health and Well-Being) by preventing lifestyle diseases, SDG 8 (Decent Work and Economic Growth) by increasing rural income, SDG 10 (Reduced Inequalities) by including smallholder farmers in the formal value chain, SDG 12 (Responsible Consumption and Production) by promoting sustainable diets, and SDG 13 (Climate Action) by promoting climate-resilient agricultural practices. The conceptualization of the study views marketing as the means of transmission, which transforms the sustainable production into quantifiable SDG outputs.

REVIEW OF LITERATURE

SDG 2 & 3 – Nutrition and health

It highlighted that millets were climate-resistant crops that are essential in meeting SDGs 2, 12, and 13 (United Nations, 2023). The report points out the policy convergence, food security, and green consumption behaviour. It has contributed the significance of strengthening value chains and consumer awareness campaigns which has reinforced the fact that marketing systems are the key to changing production gains into dietary transformation. Recent studies underpin strategic health based branding of millets as a result of their nutritional and functional quality.



A systematic review carried out by Anitha et al. (2021) showed that the consumption of millet has a major drop in blood glucose levels and enhances ischemic health. The research advocates health-based branding measures and makes millets functional foods to enhance their competitive stance within both diabetic and fitness-sensitive consumer groups in urban markets.

Millet has turned out to be a source of fibre, micronutrients, and bioactive compounds, which imply antioxidant and anti-diabetic effects, making it a feasible functional food in sustainable diets (Frontiers in Plant Science, 2025). The additional research supports the classification of millets as a super food based on a low glycaemic index and micronutrient density, which reinforces the marketing based on health concepts especially when targeting urban consumers (Planta, 2024).

SDG 8 & 10 – Inclusive value chains

The review also points out that the enhancement of the value chains by means of Farmer Producer Organizations (FPOs) helps farmers gain their market access and enables them to be aggregated, which can lead to the cost reduction and amplification of the bargaining power (Indian Journal of Extension Education, 2024).

This is an indication of wider results that the value chain innovation and regional branding increase traceability and authenticity which are vital aspects of consumer confidence and acceptance of markets in sustainable food systems (Food Policy, 2023).

SDG12 - Responsible consumption.

According to urban consumer research, people have high awareness about the advantages of millets and still this does not necessarily translate into regular purchase behaviour. The main obstacles, including the price sensitivity, a lack of product choice, and an average sensory appeal, are still present, even among the health-oriented consumers (Extension Journal, 2025).

Although there is a growing body of studies on the subject of millet experiential marketing, more comprehensive evidence on sustainable food systems proposes that interactive engagement (which can be in the form of cooking demonstrations, food fairs, and inclusion in restaurant menus) contributes to consumer familiarity, consumer perception, which is crucial in behaviour change (Journal of Retailing and Consumer Services, 2024)

Also, the diversification of the products (e.g. snacks made of millet, bakery) contributes to social marketing because it caters to the contemporary living and preferences, thus reinforcing the practice of sustainable consumption (Food & Function, 2024). Schwab et al. (2020) hypothesized that the ability of SDGs to enhance long-term competitive advantage would be achieved by incorporating them into corporate branding. Their discussion suggests that sustainability based marketing promotes stakeholder trust in which the same principle can be applied when it comes to millet branding in regional markets like Coimbatore.

SDG 13 – Climate resilience

Their ability to withstand heat stress and unpredictable rainfall is highlighted in the International Year of Millets report, making them climate adaptation strategic crops and sustainable agricultural systems (United Nations, 2023). Agronomic reviews also highlight that millets have an effective aqueous-use system, brief development periods, and physiological characteristics of stress resistance, and should be discussed as substitutes of water-intensive cereals in climate-sensitive areas (Planta, 2024; Frontiers in Plant Science, 2025). Unlike the Green Revolution crops, which are input intensive and thus lack diversification mechanisms, there are resilient grains like the millet which present avenues of diversification that make agro-ecosystems more stable and less prone to climatic shocks (Pingali, 2012).

DISCUSSIONS

The literature review shows that the millet revival is not a phenomenon limited to the agricultural diversification anymore, but a larger-scale change in the sustainable Agri-food marketing systems. This change is informed by the convergence of climate resilience and health awareness with the new trends of sustainable consumption in the setting of Coimbatore district.

To begin with, on production grounds, millets have intrinsic ecological merits, such as water-intensive business, semi-arid environment adaptability, and low chemical reliance which is very much in line with SDGs 2 and 13. Nonetheless, ecological suitability is not sufficient to ensure market expansion as pointed out in the literature. The legacy of the Green Revolution with its consumer preference and policy support of rice and wheat has established deep rooted consumption trends that have to be creatively overcome by the millets. Thus, marketing will be a key in repositioning millets as the traditional staples to the present-day functional foods.

Second, health branding is a strong force of demand. Nutritional and medical research findings prove the glycaemic and metabolic advantages of millets, which justify the arrangement as diabetic-welcoming and fibre-rich grains. This offers a clear segmentation opportunity in the urban centres like Coimbatore city which is experiencing a rise in lifestyle diseases. According to the literature, functional food branding, backed by a decent



scientific background and labelling, can make a big impact on urban customer perception. Nevertheless, the high cost of health branding can be restrictive to mass adoption unless it is balanced with low-price measures.

Third, the awareness-purchase gap is stable according to consumer behaviour studies. Despite being aware of health and sustainability advantages associated with millets, consumers cannot make real purchases due to price-sensitivity, lack of ready-to-cook options, taste-adjustment and availability. In the case of Coimbatore district, this means that the distribution density, retail shelf placement and product innovation (e.g. millet-based snacks, breakfast cereals, and bakery products) play a key role in the transition of trial to repeat purchase. Millet food festivals and restaurant assimilations, social proof, and influence endorsements can also normalize the intake of millet even further.

Fourth, the Farmer Producer Organizations (FPOs) have contributed towards value chain integration, which has enhanced supply-side efficiency. Aggregation enhances price realisation and market penetration, as well as making it possible to brand at district or regional levels. In the case of Coimbatore, geographically based identity could be developed like climate-smart millets of Coimbatore, which would boost the authenticity and traceability. Nonetheless, the literature implies that value chain coordination should not be reduced to just aggregation but should also include processing infrastructure, packaging innovation, and digital marketing capabilities.

Fifth, integration in marketing strategy of SDGs is competitive in the long-term. Making millet products explicitly associated with climate action, rural livelihood support, and responsible consumption can be an appeal to ethically conscious urban consumers. As the discussion shows, marketing is the transmission mechanism transforming sustainable production into quantifiable SDG results. The potential of sustainability of millets has not been achieved without good communication strategies.

Managerial Implications

- **Regional Brand:** Develop a good geographical name like Coimbatore climate Smart Millets to bring in some authenticity, traceability and differentiation in the regional and urban markets.
- **Niche Market Segmentation:** Diabetics, fitness and health conscious urban workers and ethical buyers willing to embrace functional and sustainable food products are the target audience that can be engaged.
- **Pricing Strategy:** Strategic penetration pricing will be employed in the basic types of millet to promote mass consumption but high-value added/ ready to eat millet products are to be priced at a higher cost.
- **SDG-Aligned Promotion:** Develop communication campaigns with a focus on health benefits, climate resilience, and rural livelihood support to promote alignment of branding with Sustainable Development Goals.
- **Omni-Channel Distribution:** Enhance availability with combined offline retail distribution, supermarkets, institutional procurement, and digital e-commerce channel to enhance the accessibility and repeat purchasing behaviour.

CONCLUSION

This theoretical overview has found that millet revival in Coimbatore district is a marketing based sustainability change, and not just an agronomic one. Although millets are naturally beneficial in promoting climate resilience, nutritional security, and rural livelihoods in line with the SDG framework, their mass adoption requires proper branding, education of the consumers, integration of value chain, and innovation of their products. The suggested Production -Marketing - Consumption - SDG Outcomes channel places marketing as the most important transmission channel that converts ecological benefits of production into quantifiable developmental outcomes. Health-based positioning, regional identity branding and omni-channel are necessary to handle the long-standing awareness-purchase gap with the aim of boosting demand.

Theoretically, the study was able to develop sustainable marketing due to its ability to show that the implementation of SDGs can serve as the normative sustainability strategy as well as a competitive differentiation strategy in regional agri-food markets. Policy-wise, the promotion of millet should go beyond production incentives to encompass the promotion of branding, expansion of institutional procurement, capacity building of FPOs, and communication programs in accordance with SDGs. To have a clearer picture of millet-driven sustainable agri-food transitions, future studies need to empirically examine the suggested framework through consumer behaviour research, willingness-to-pay research, and impact research.

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